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Bicycle and Pedestrian Program

Collision Analysis
2002 Annual Report

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Background and Introduction

To evaluate Traffic Collisions, the City of San José's Department of Transportation (DOT) obtains copies of Traffic Collision Reports (TCR) occurring in San Jose, which are prepared by the San Jose Police Department (SJPD) at the time of the collision. DOT then collects basic collision data using proprietary software called Traffic Accident Prevention System (TAPS). DOT staff enters approximately 14,000 TCR's into TAPS each year.

The City of San José Bicycle Pedestrian Program provides additional analysis of all TCR's involving bicyclists or pedestrians. This analysis is summarized and submitted by DOT staff for review by the City of San José's Bicycle Pedestrian Advisory Committee (BPAC).

Collisions are classified based on a system of assigning the party more legally at fault with one of a few crash types. The 2002 California Vehicle Code was referenced in regards to assigning fault in each collision.

Attached is the report for bicycle or pedestrian collisions that occurred for the year of 2002.

I. BICYCLE COLLISION DATA

- In the year of 2002, there were 396 bicycle collisions (3 fatal)[1].

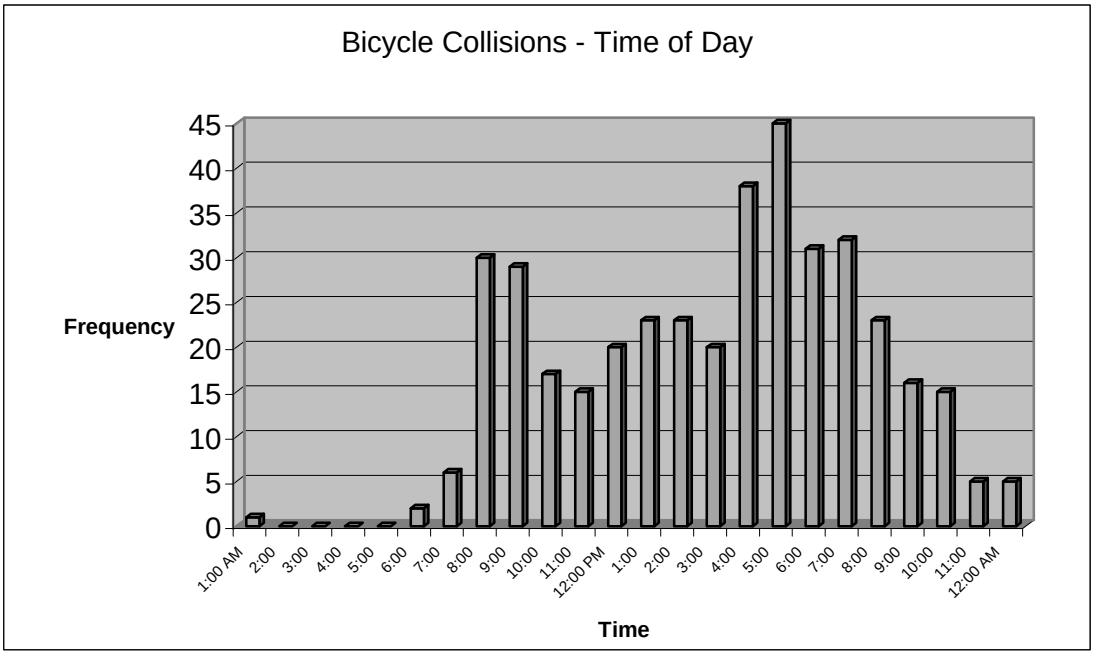

figure 1.1[2]

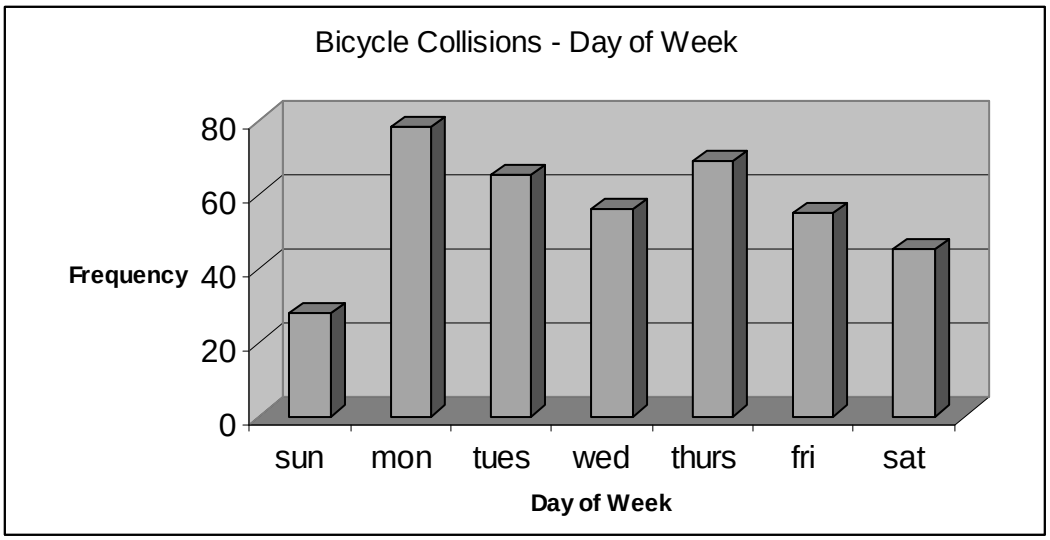

figure 1.2

[1] Data as of 3/12/2003. Note that crash data may change slightly as a result of late reports and changing medical conditions.

[2] Figures represent data for specific queries. However, some queries involve data that may not be present in all TCR's. This accounts for the discrepancies in numbers as queries become more extensive.

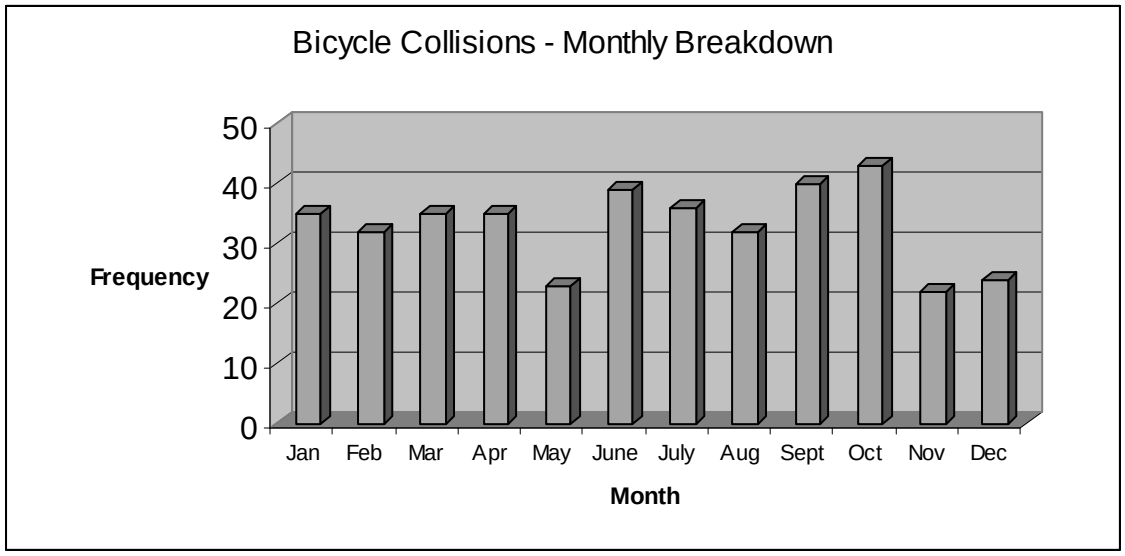

figure 1.3

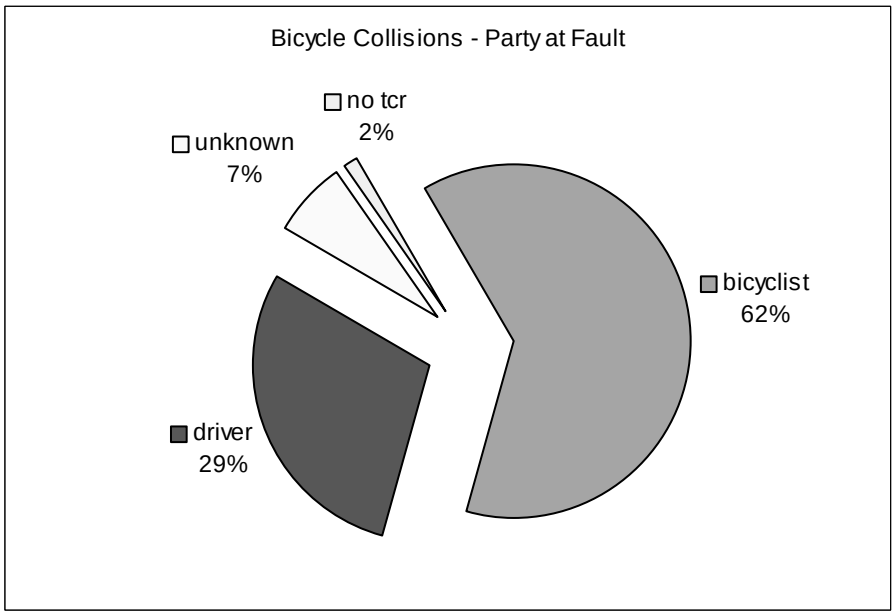

figure 1.4 (see table 1.1)

Bicycle Collisions - Party at Fault		
primary		**363**
	bicyclist	*250*
	driver	*113*
unknown		**27**
no TCR[3]		**6**
total		**396**

table 1.1

[3] TCR – Traffic Collision Report

Bicyclist at Fault

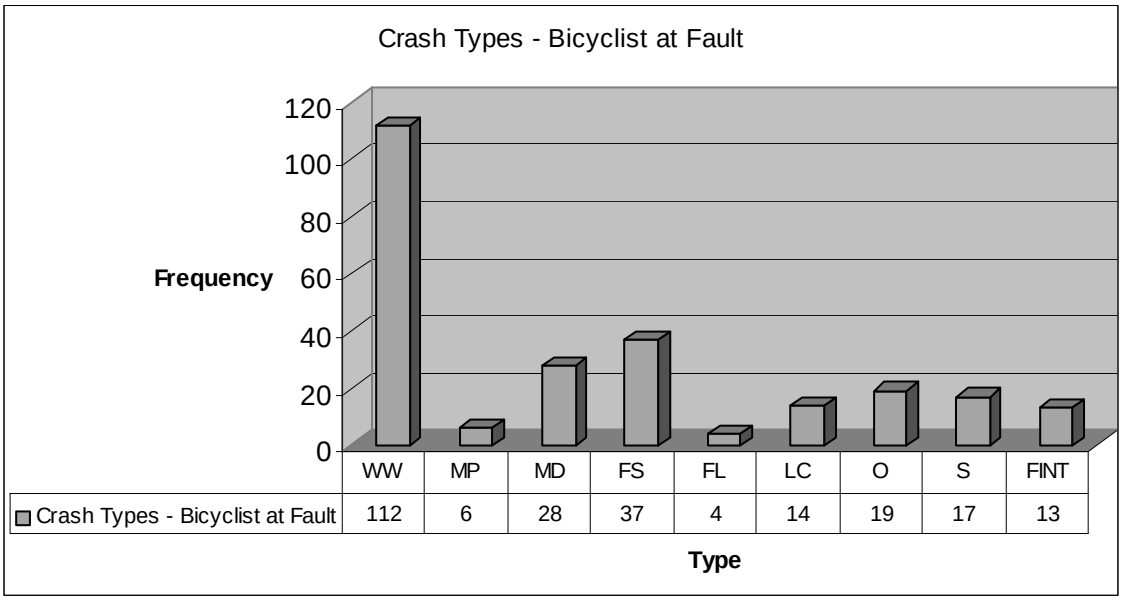

figure 1.5

Crash Type Abbreviations and Descriptions

WW	*Wrong Way* : Bicyclist riding on wrong side of roadway.
MP	*Mid-Block Pull-Out* : Bicyclist riding from driveway onto roadway.
MD	*Mid-Block Dash* : Bicyclist attempts to cross roadway when unsafe to do so at a mid-block location.
FS	*Failure to Yield, Stop Sign/Signal* : Bicyclist does not stop at stop sign or crosses a roadway against the signal.
FL	*Failure to Yield, Left Turn* : Bicyclist making a left turn does not yield to oncoming traffic.
LC	*Lane Change* : Bicyclist changes lane in an unsafe manner.
S	*Solo* : Accident involving a bicyclist only.
FINT	*Failure to Yield in Intersection* : Bicyclist does not yield to a driver in the intersection, not defined by FR or FL.
O	*Other* : Crash type not defined by any of the types above (eg. Faulty bike components, towed by vehicle, jumping off curb into oncoming traffic).

Driver at Fault

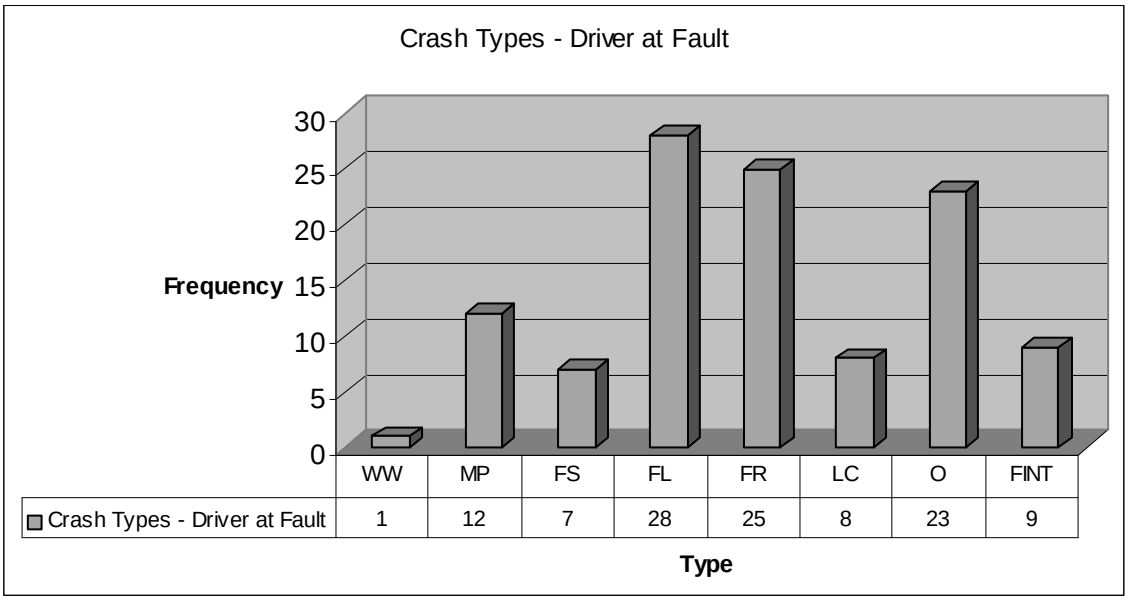

figure 1.6

Crash Type Abbreviations and Descriptions

WW	*Wrong Way* : Driver riding on wrong side of roadway.
MP	*Mid-Block Pull-In/Out* : Driver pulls into or out of driveway.
FS	*Failure to Yield, Stop Sign/Signal* : Driver does not stop at stop sign or crosses a roadway against the signal.
FL	*Failure to Yield, Left Turn* : Driver making a left turn does not yield to bicyclist.
FR	*Failure to Yield, Right Turn* : Driver making a right turn does not yield to bicyclist.
LC	*Lane Change* : Driver changes lane in an unsafe manner.
FINT	*Failure to Yield in Intersection* : Driver does not yield to bicyclist in the intersection, not defined by FR or FL.
O	*Other* : Crash type not defined by any of the types above (eg. Speeding, opened car door, rear end bicycle).

Age of Bicyclist at Fault

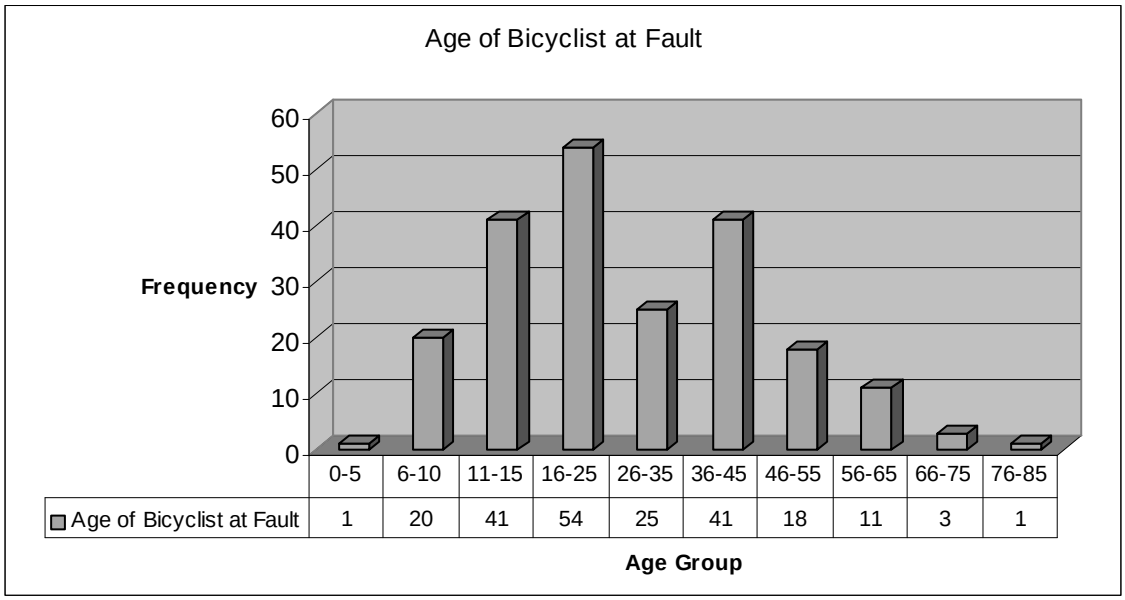

figure 1.7[4]

Age of Driver at Fault

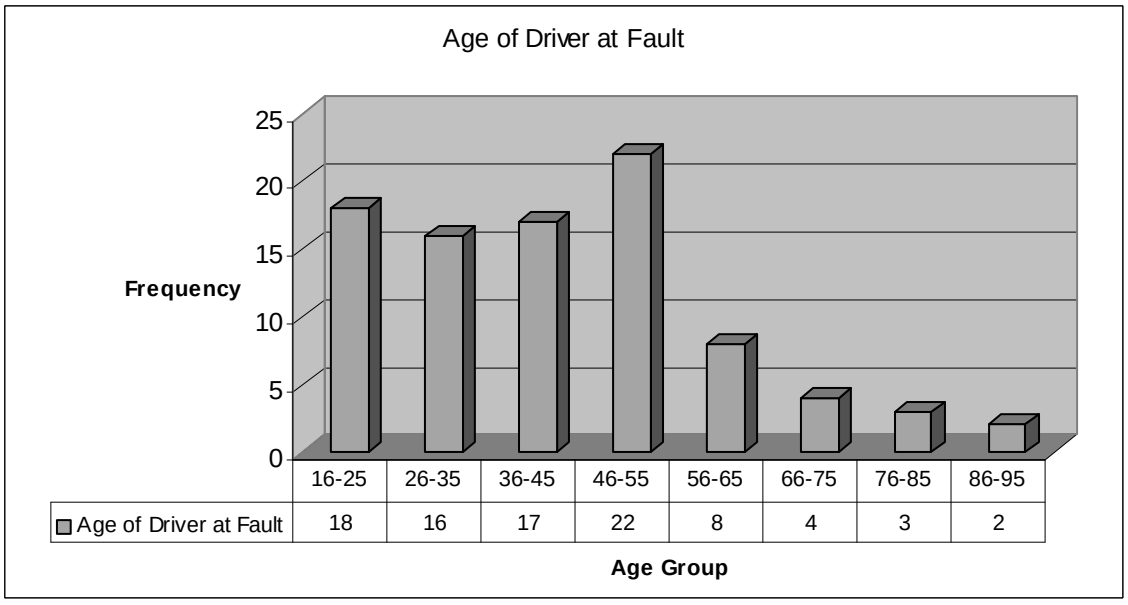

figure 1.8

[4] Age intervals for juveniles were set smaller for the purpose of observing juvenile decision-making on the roadway.

Wrong Way Riding in detail

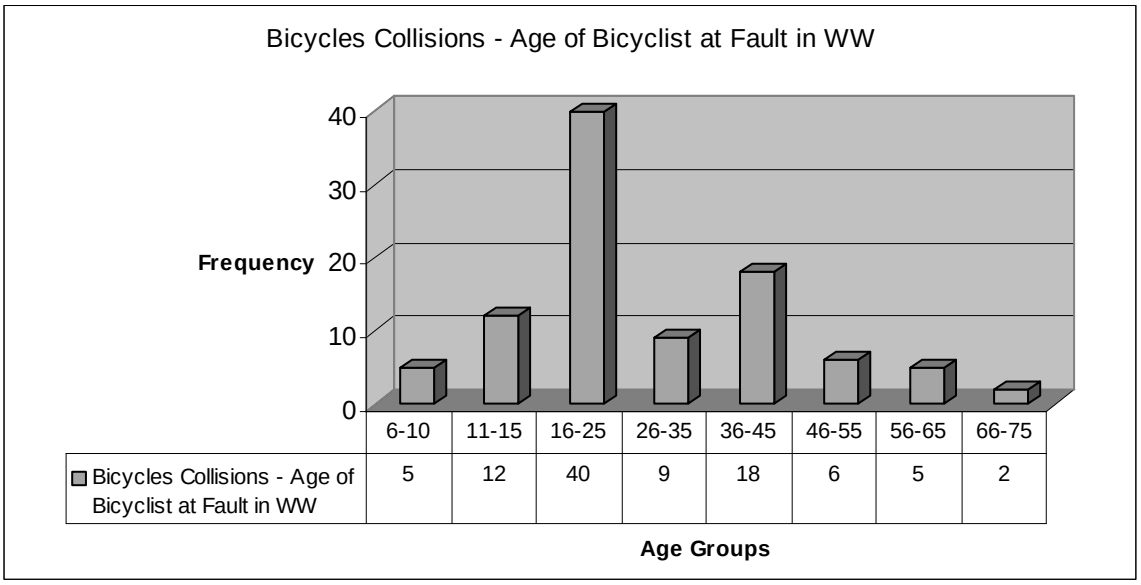

figure 1.9

The most prevalent crash type occurring in bicycle collisions involves the bicyclist riding on the wrong side of the road. However, in most of these cases, the driver is also considered at fault to some degree (ie. Police will assign the bicyclist a primary collision factor (PCF) and the driver is assigned an associated collision factor (ACF)).

Most collisions involving a bicyclist riding on the wrong side of the road occur when the driver is either making a right turn at an intersection or pulling out of a parking lot or driveway to make a turn. In both instances, it is usually the case that the driver looking for oncoming traffic, does not look for traffic in the direction of the completed turn. The driver will proceed to turn without looking toward the direction of travel and collide with the bicyclist riding on the wrong side of the road.

The following figure is a detailed breakdown of the bicyclist's primary collision factor of riding on the wrong side of the road and the respective driver's associated collision factor.

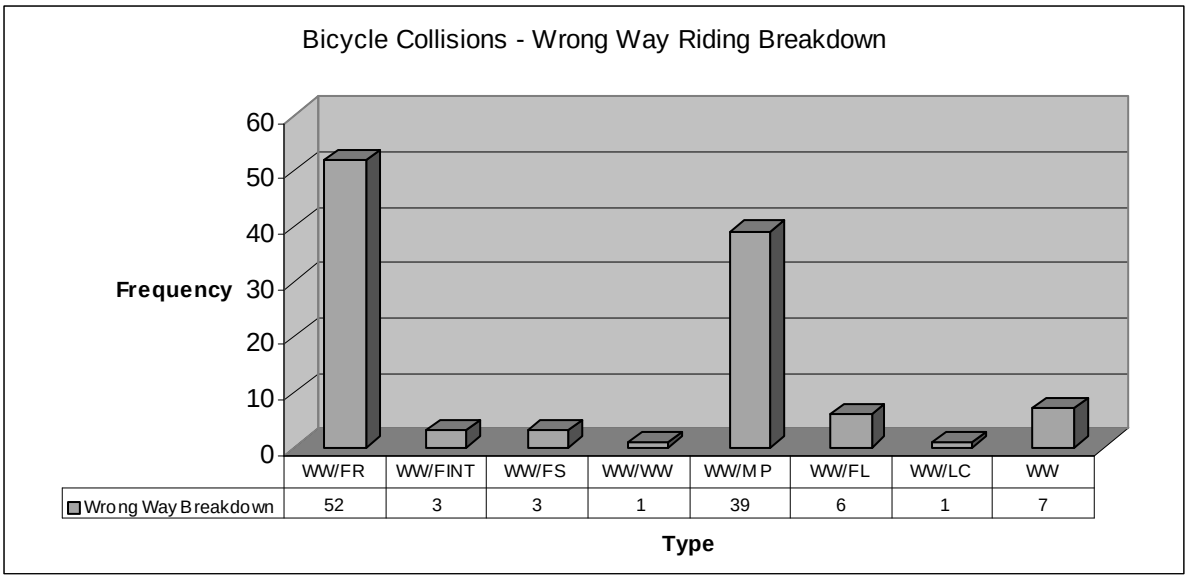

figure 1.10[5]

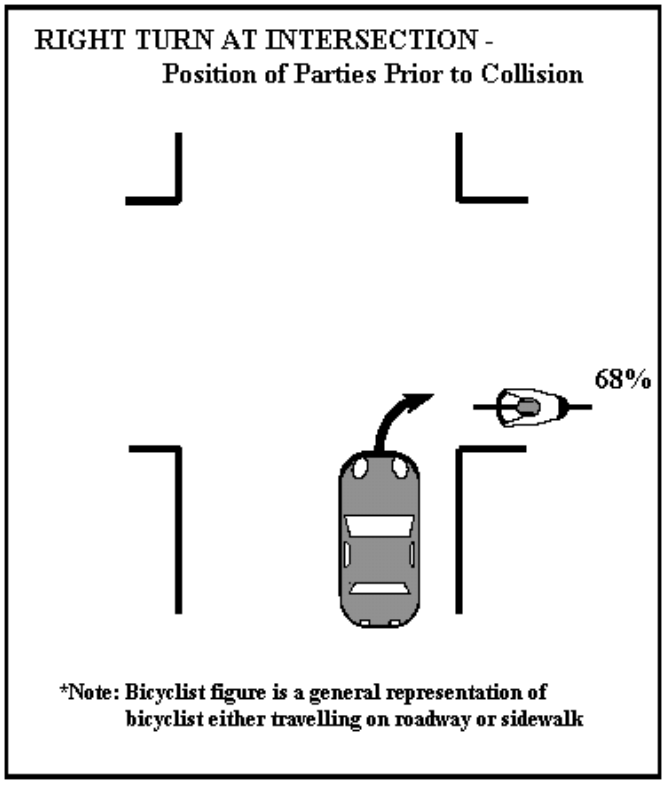

figure 1.11 – The WW/FR Scenario

The figure on the left represents the *WW/FR* scenario where a bicyclist riding on the wrong side of the road collides with a vehicle attempting to make a right turn at an intersection. This particular scenario accounts for 68% of *all* collisions involving a vehicle failing to yield when making a right turn.

[5] See page 5 for Driver at Fault Crash Type Abbreviations and Definitions

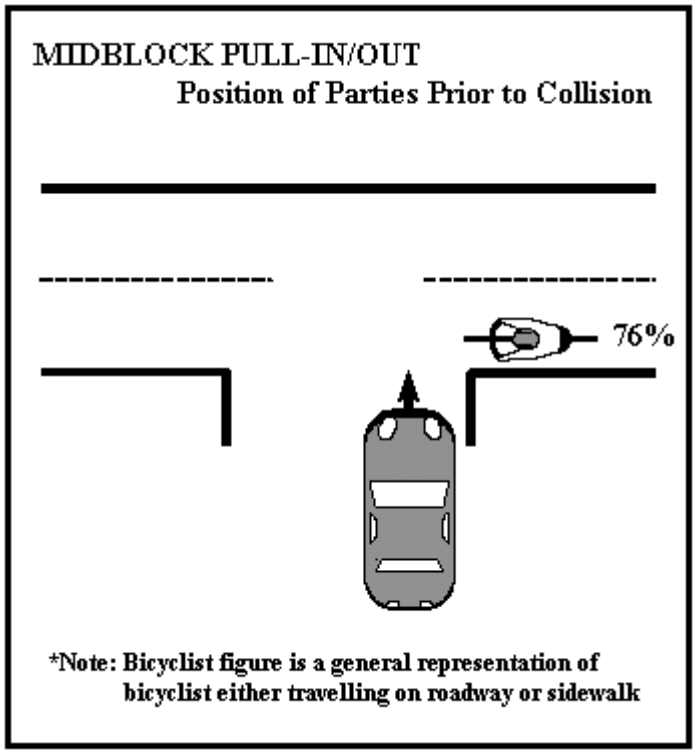

figure 1.12 – The WW/MP Scenario

The figure on the left represents the *WW/MP* scenario and is defined by a bicyclist riding on the wrong side of the road colliding with a vehicle pulling in or out of a driveway. This scenario accounts for 76% of *all* midblock pull-in/out collisions.

II. PEDESTRIAN COLLISION DATA

- In the year of 2002, there were 328 pedestrian collisions (20 fatal)[6].

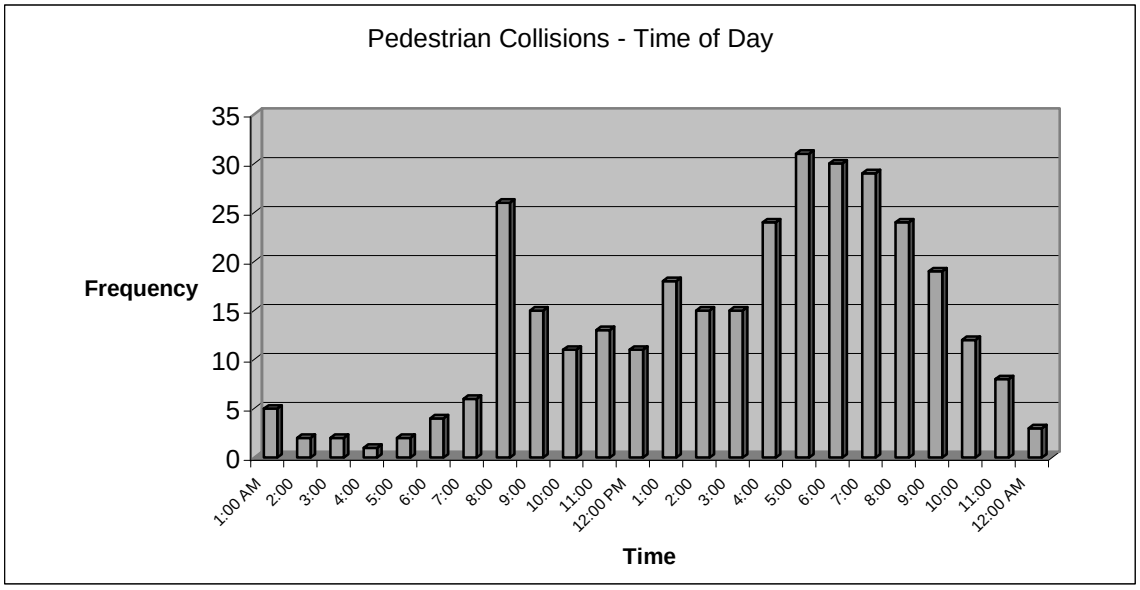

figure 2.1

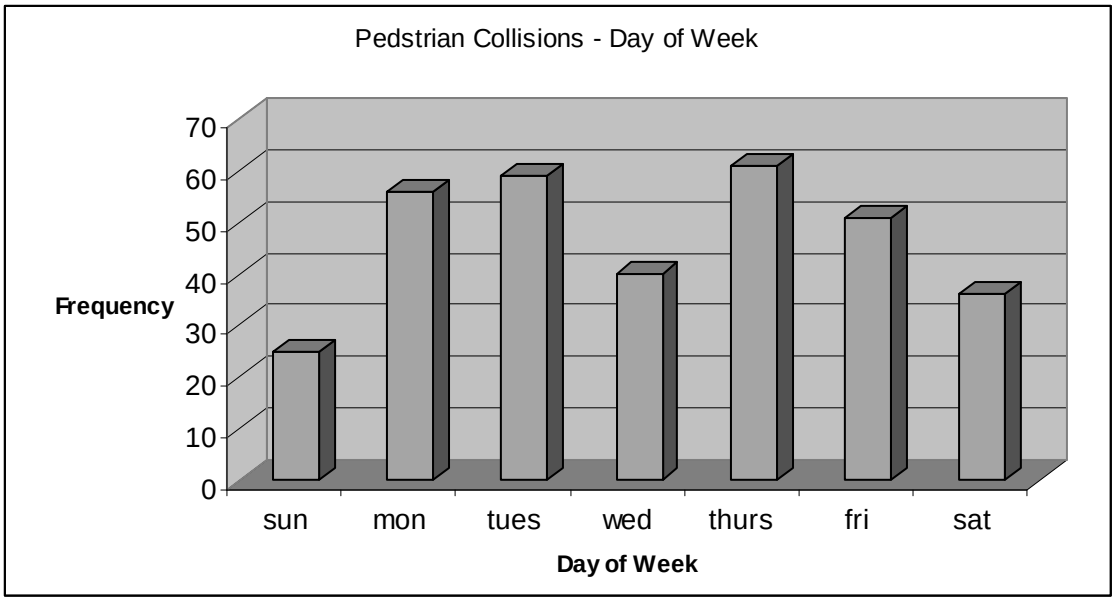

figure 2.2

[6] Data as of 4/28/2003.

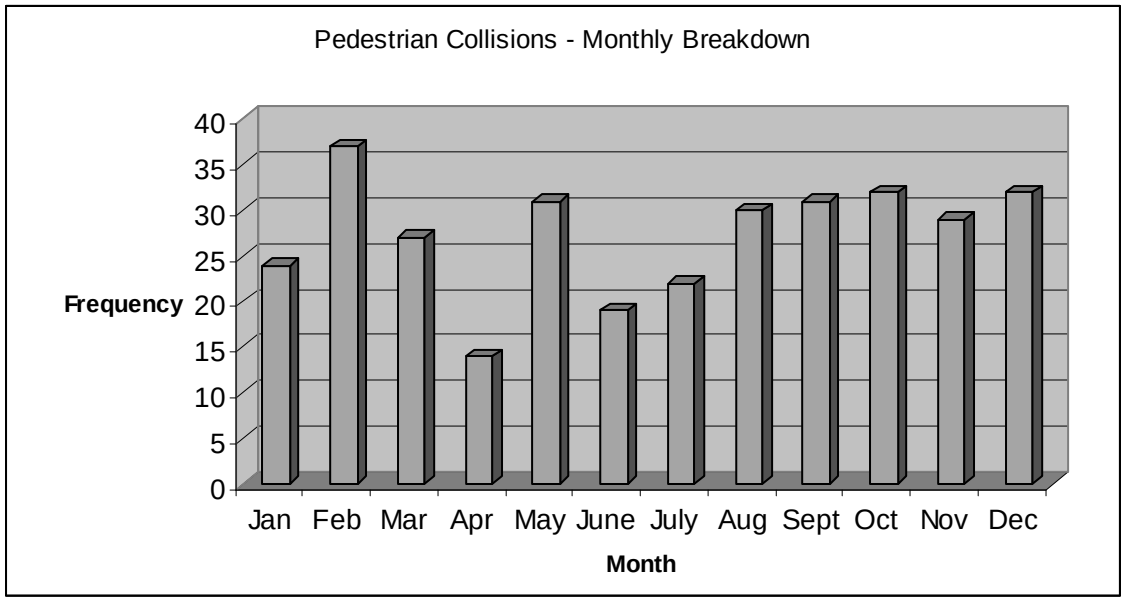

figure 2.3

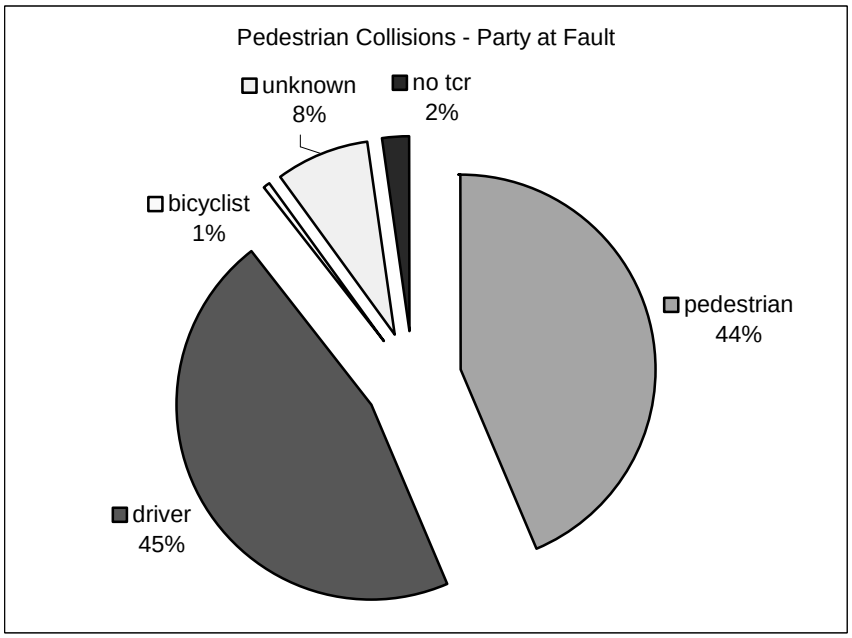

figure 2.4 (see table 2.1)

Pedestrian Collisions - Party at Fault		
primary		**295**
	pedestrian	*143*
	driver	*150*
	bicyclist	*2*
unknown		**26**
no TCR		**7**
total		**328**

table 2.1

Bicyclist at Fault

The year 2002 saw three collisions involving a bicyclist and pedestrian. The first collision involved a bicyclist who failed to yield to a signal and collided with a pedestrian in a crosswalk. The second collision involved a juvenile bicyclist who rode on the sidewalk and collided with a juvenile pedestrian walking on the sidewalk. The last one was unknown as to cause in the collision.

Pedestrian at Fault

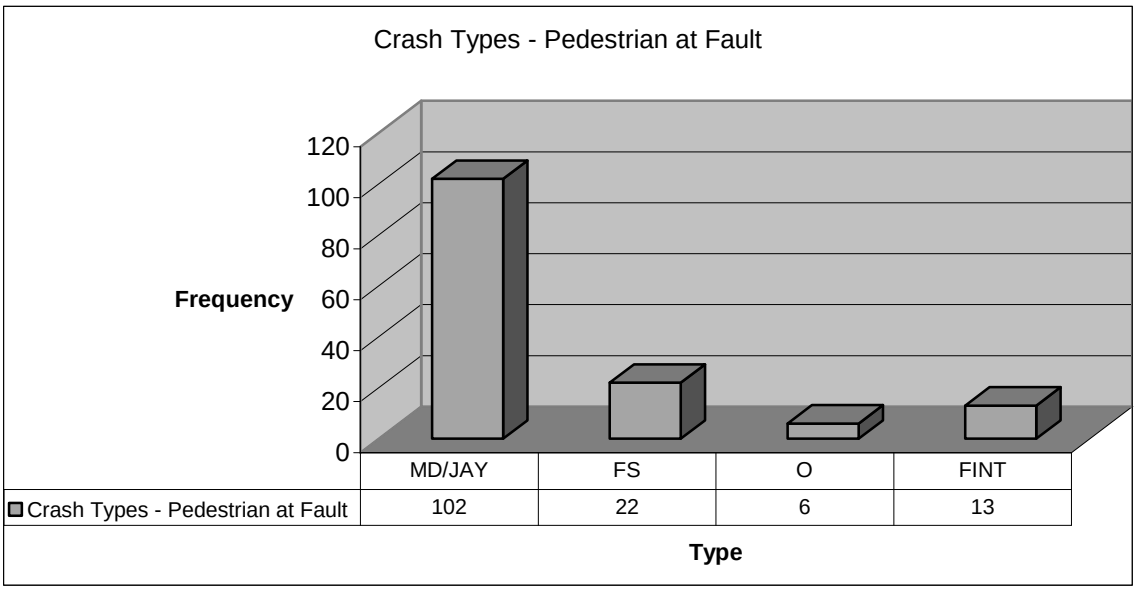

figure 2.5

Crash Type Abbreviations and Descriptions

MD/JAY *Mid-Block Dash/Jaywalking* : Pedestrian crosses a roadway at mid-block and in a non-crosswalk.

FS *Failure to Yield, Stop Sign/Signal* : Pedestrian crosses a roadway against the signal

FINT *Failure to Yield in Intersection* : Pedestrian does not yield to a driver in the intersection.

O *Other* : Crash type not defined by any of the types above.

Driver at Fault

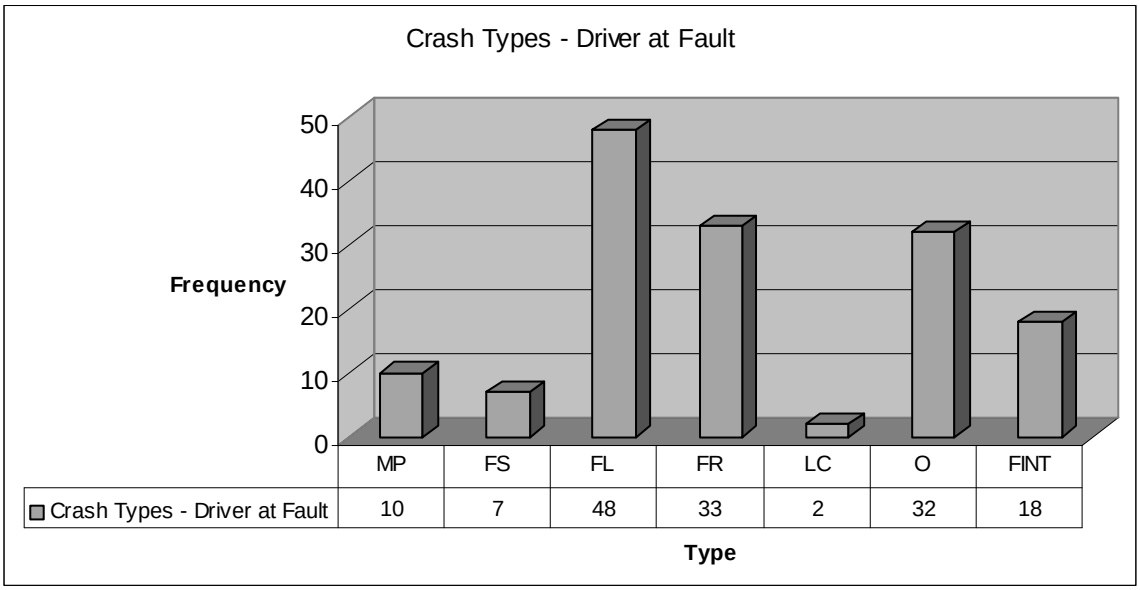

figure 2.6

Crash Type Abbreviations and Descriptions

MP	*Mid-Block Pull-In/Out* : Driver pulls into or out of driveway.
FS	*Failure to Yield, Stop Sign/Signal* : Driver does not stop at stop sign or crosses a roadway against the signal.
FL	*Failure to Yield, Left Turn* : Driver making a left turn does not yield to pedestrian.
FR	*Failure to Yield, Right Turn* : Driver making a right turn does not yield to pedestrian.
LC	*Lane Change* : Driver changes lane in an unsafe manner.
FINT	*Failure to Yield in Intersection* : Driver does not yield to a pedestrian in the intersection.
O	*Other* : Crash type not defined by any of the types above.

Age of Pedestrian at Fault

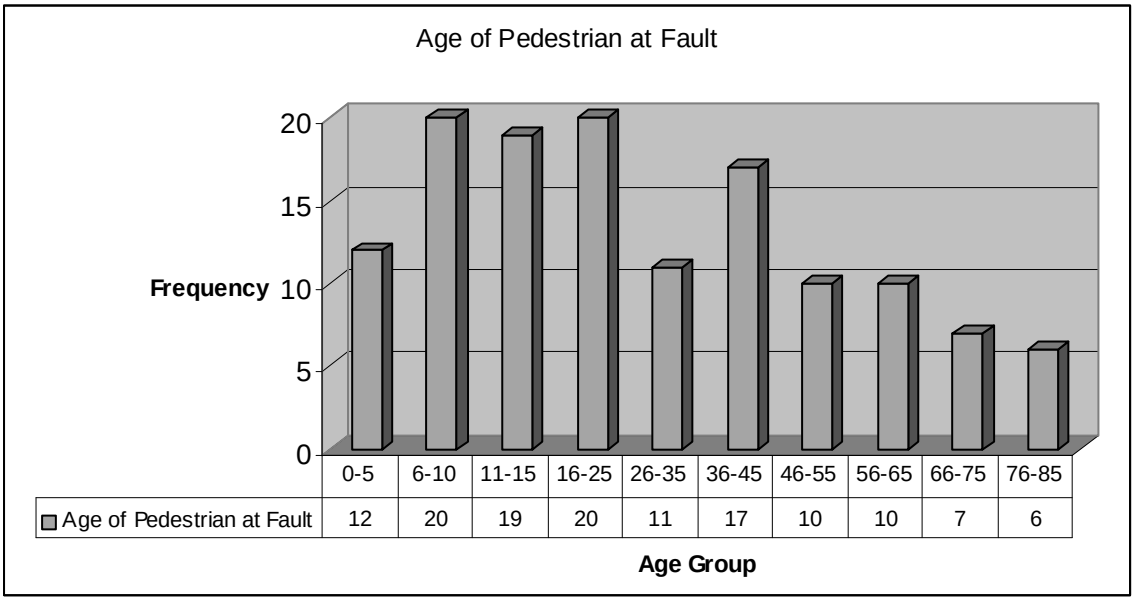

figure 2.7

Age of Driver at Fault

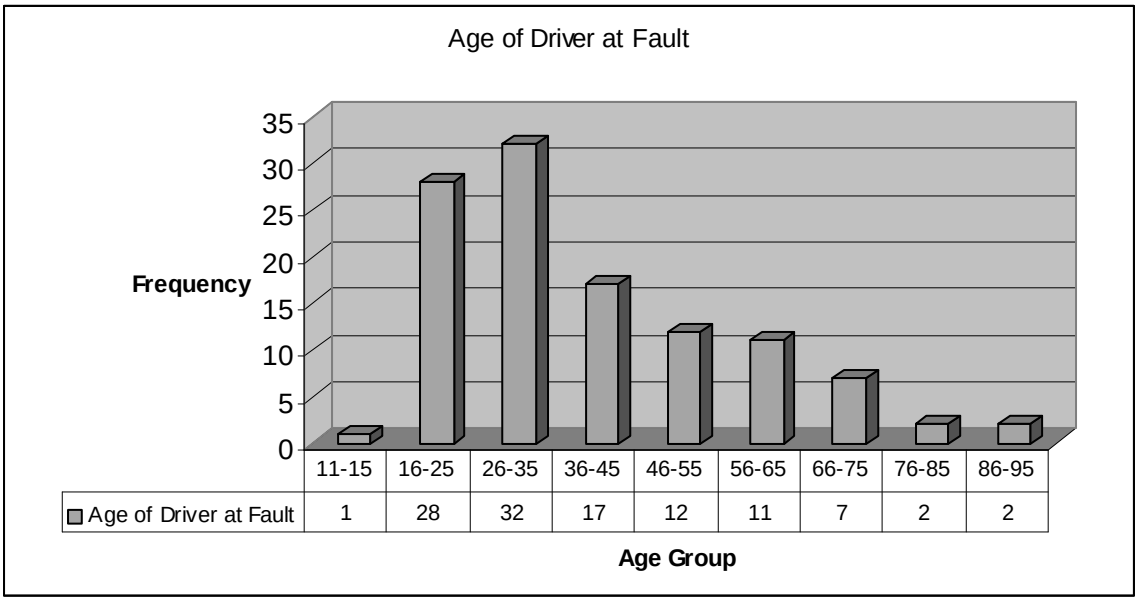

figure 2.8

Pedestrian Midblock Dash / Jaywalk in detail
The most prevalent crash type involved in a pedestrian collision is that of the midblock dash / jaywalk. This scenario is defined by a pedestrian who crosses the street at a non-intersection location and is hit by an oncoming vehicle.

The MD/JAY scenario accounts for 71% of all pedestrian at fault collision types.

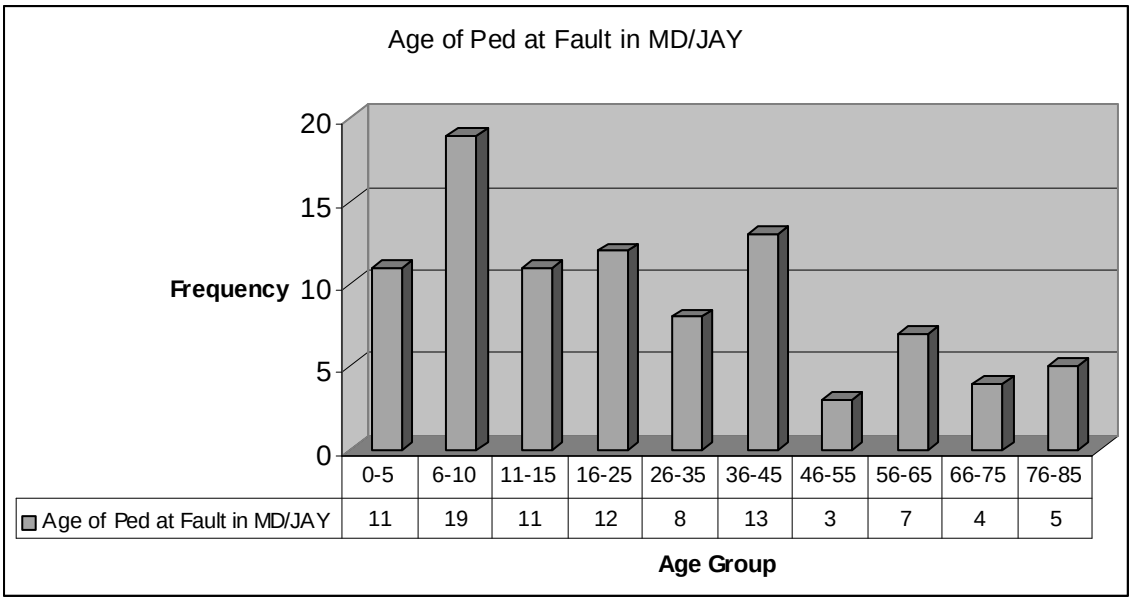

figure 2.9

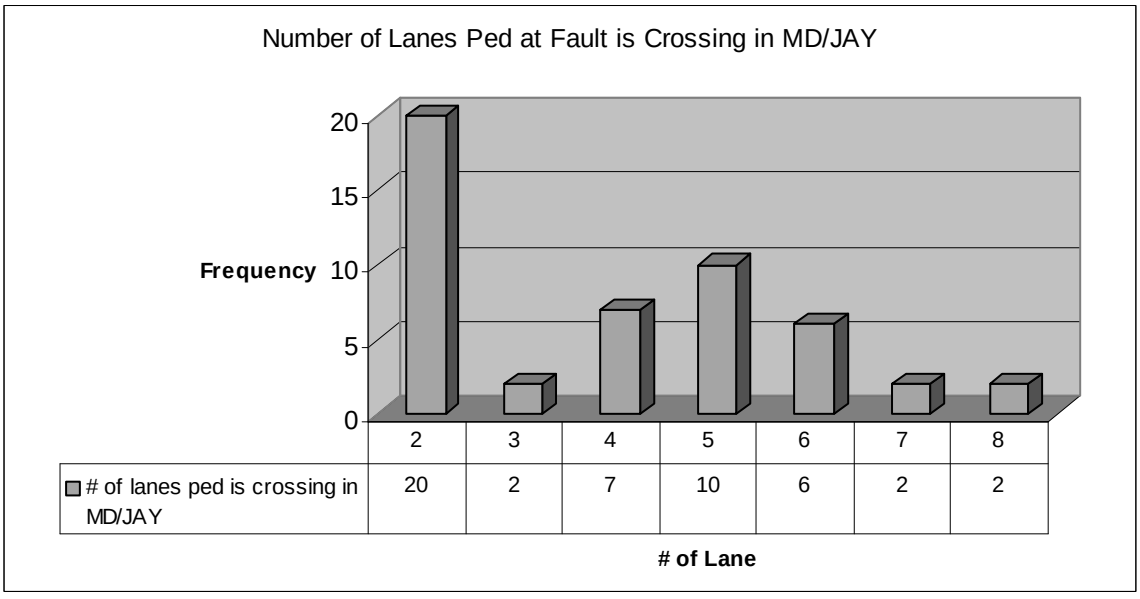

figure 2.10

Pedestrian Fatality Analysis
In the year of 2002, there were 20 pedestrian fatalities (5 hit and run).

Nearly 58% of all pedestrian fatalities involved a pedestrian in a MD/JAY scenario.

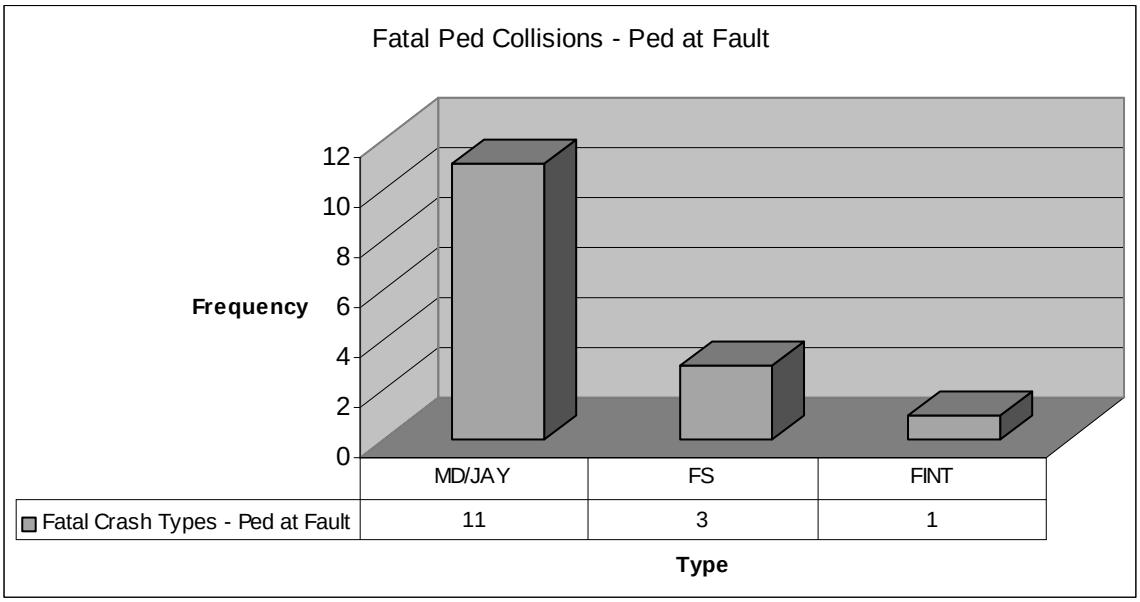

figure 2.11

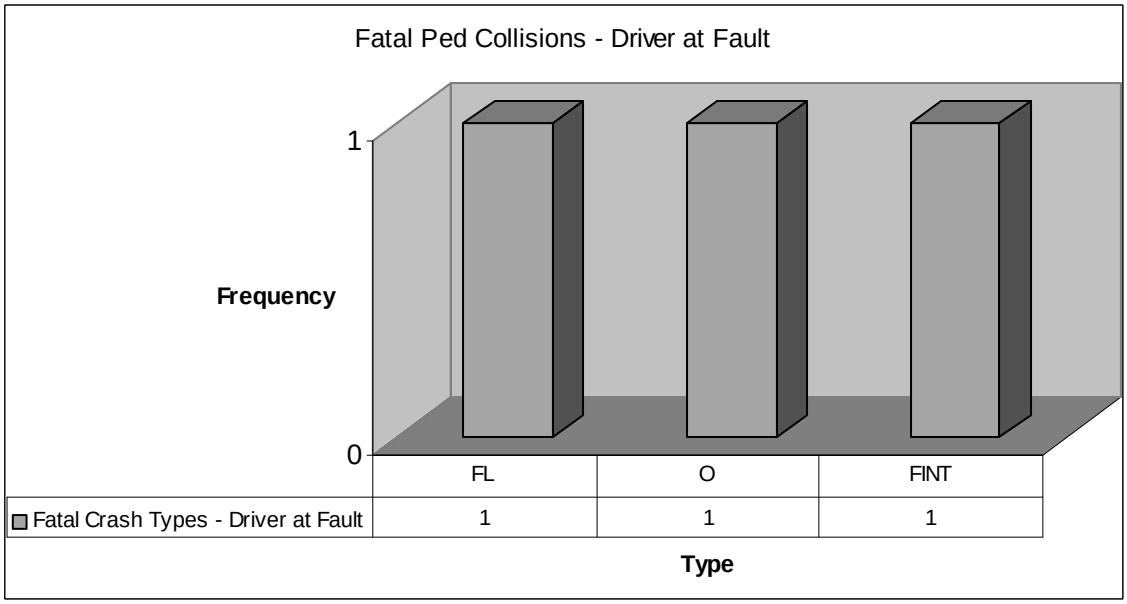

figure 2.12

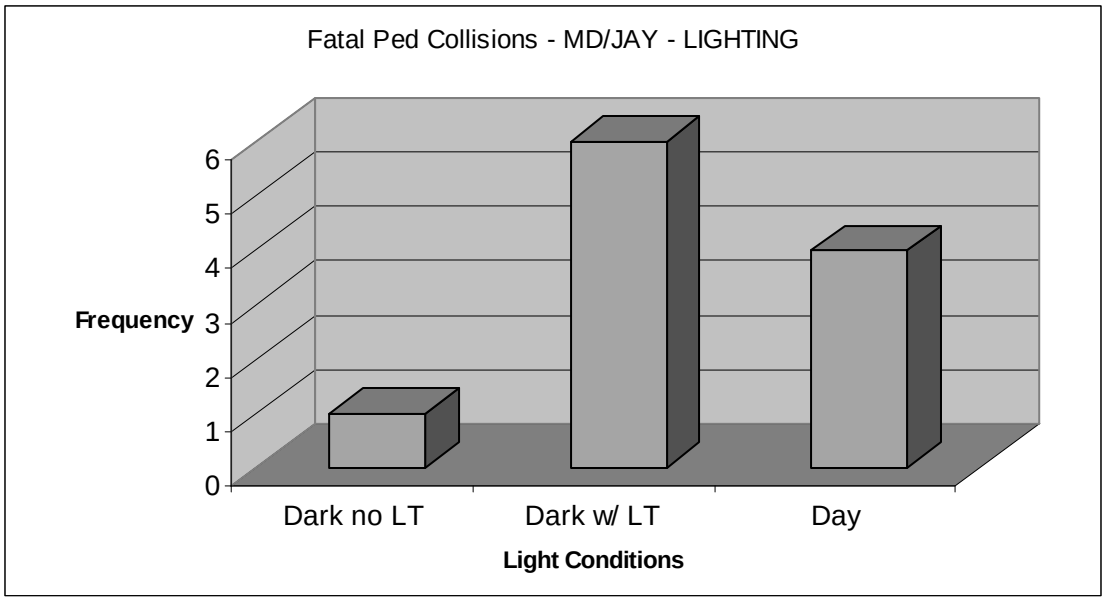

figure 2.13[7]

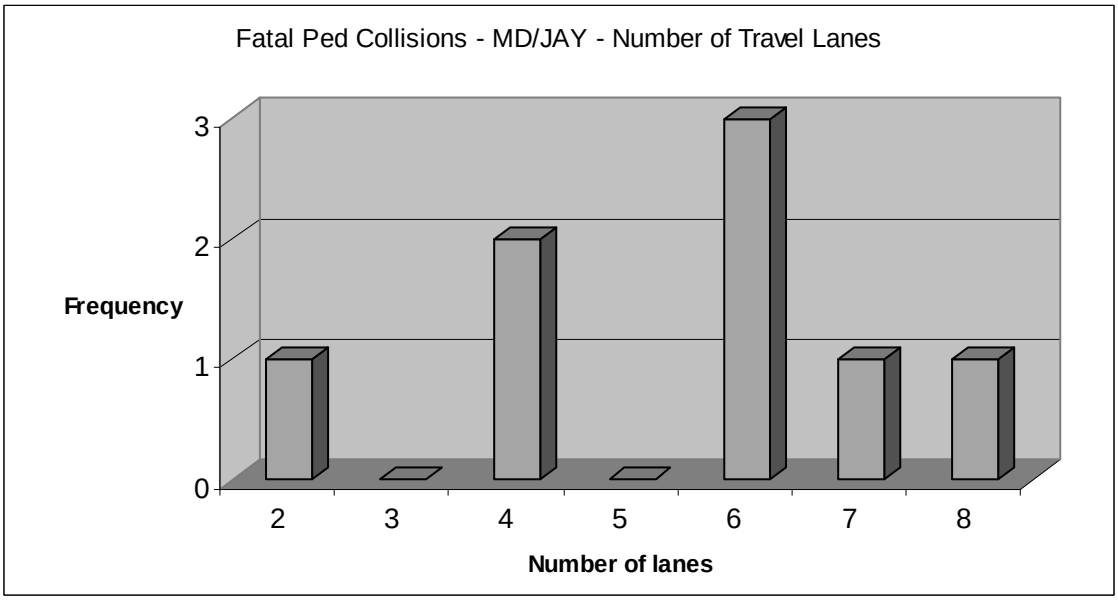

figure 2.14

[7] Dark no LT – dark environment with no street lights, Dark w/ Lt – dark environment with street lights.

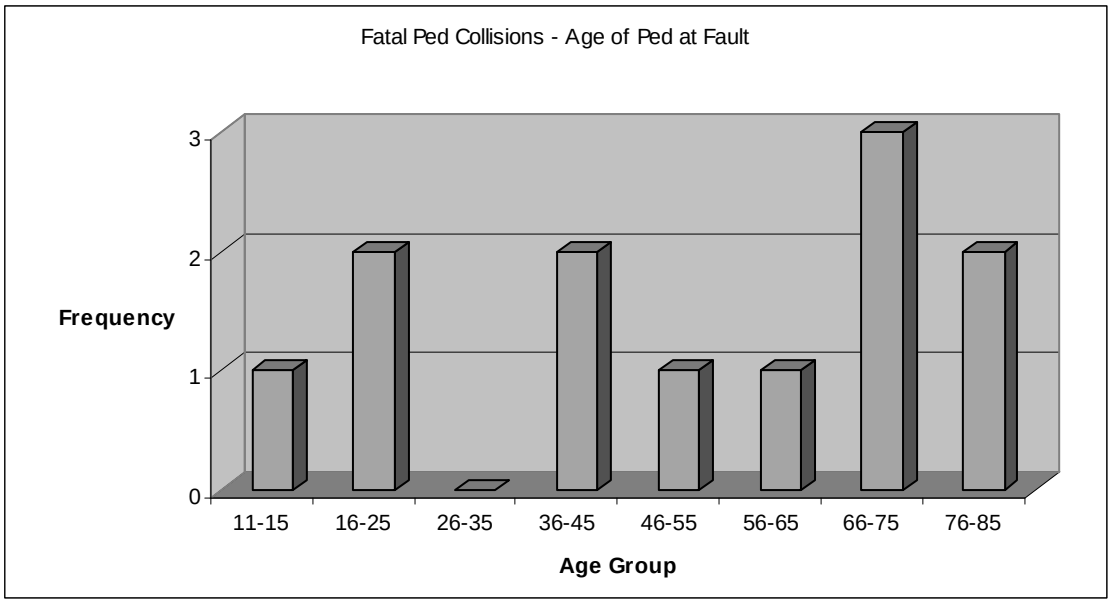
Fatal Ped Collisions - Age of Ped at Fault
Frequency
3
2
1
0
11-15
16-25
26-35
36-45
46-55
56-65
66-75
76-85
Age Group

figure 2.15

III. Hit and Run

In the year of 2002, there were 55 reported hit and run collisions involving a bicyclist and 69 (4 fatalities) reported hit and run collisions involving a pedestrian.

Drivers at fault involved in a bicycle or pedestrian collision accounted for the majority of parties that fled the scene of a collision. However, 40% of drivers in a bicycle collision and 24% of drivers in a pedestrian collision who fled the scene were not legally at fault for the collision.

Duty to Stop at Scene of Accident – California Vehicle Code[8]

CVC 20001. (a) The driver of any vehicle involved in an accident resulting in injury to any person, other than himself or herself, or in the death of any person shall immediately stop the vehicle at the scene of the accident and shall fulfill the requirements of Sections 20003 and 20004.

CVC 20002. (a) The driver of any vehicle involved in an accident resulting only in damage to any property, including vehicles, shall immediately stop the vehicle at the nearest location that will not impede traffic or otherwise jeopardize the safety of other motorists. Moving the vehicle in accordance with this subdivision does not affect the question of fault.

CVC 20003. (a) The driver of any vehicle involved in an accident resulting in injury to or death of any person shall also give his or her name, current residence address, the names and current residence addresses of any occupant of the driver's vehicle injured in the accident, the registration number of the vehicle he or she is driving, and the name and current residence address of the owner to the person struck or the driver or occupants of any vehicle collided with, and shall give the information to any traffic or police officer at the scene of the accident. The driver also shall render to any person injured in the accident reasonable assistance, including transporting, or making arrangements for transporting, any injured person to a physician, surgeon, or hospital for medical or surgical treatment if it is apparent that treatment is necessary or if that transportation is requested by any injured person.

CVC 20004. In the event of death of any person resulting from an accident, the driver of any vehicle involved after fulfilling the requirements of this division, and if there be no traffic or police officer at the scene of the accident to whom to give the information required by Section 20003, shall, without delay, report the accident to the nearest office of the Department of the California Highway Patrol or office of a duly authorized police authority and submit with the report the information required by Section 20003.

[8] California Vehicle Code -- found online at http://www.dmv.ca.gov/pubs/vctop/vc/vctoc.htm

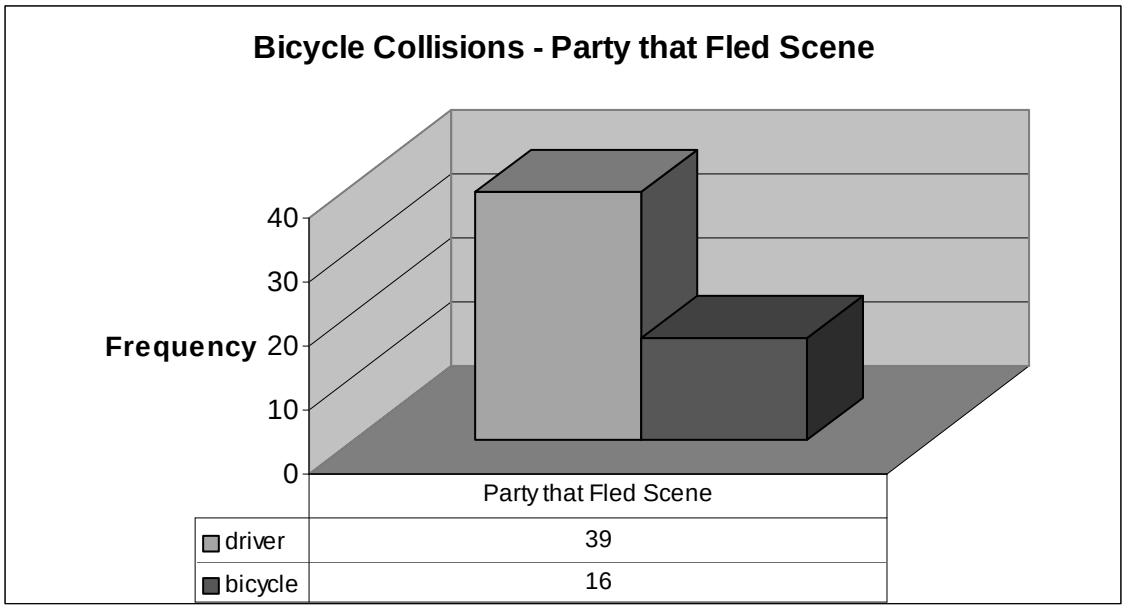

figure 3.1[9]

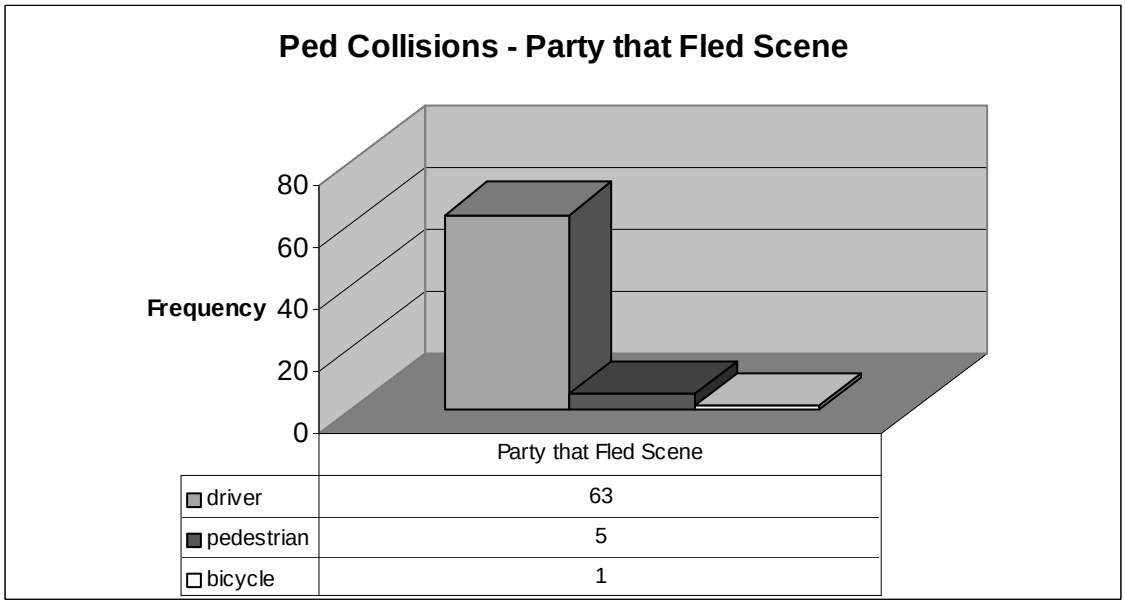

figure 3.2

[9] Legally, fleeing the scene does not necessarily render a Party at Fault.